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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
10/721,394	11/25/2003	Richard Paul Eckberg	US 138361-1	9014								
7590 Kenneth S. Wheelock General Electric Company One Plastics Avenue Pittsfield, MA 01201		01/03/2007	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">BERMAN, SUSAN W</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>1711</td><td></td></tr></table>		EXAMINER		BERMAN, SUSAN W		ART UNIT	PAPER NUMBER	1711	
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SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE									
3 MONTHS		01/03/2007	PAPER									

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/721,394

Applicant(s)

ECKBERG, RICHARD PAUL

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11-16-06.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/16/2006 has been entered.

*Response to Arguments*

Applicant's arguments filed 11/16/2006 have been fully considered but they are not persuasive.

The Declaration under 37 CFR 1.132 submitted by Dr. John Kilgour on 11-16-2006 has been considered but is unpersuasive for the following reasons. None of the comparative Examples in the Declaration is considered to be representative of the teaching of Eckberg et al. Eckberg et al disclose compositions comprising an epoxy-functional silicone, such as epoxy silicones "F" and "G" or "J", which is a mix of  $M^E D_{25} M^E$  and  $MM^E TQ$ , and a carbinol-functional silicone, and no alkylphenol compound. Comparative Examples "P", "Q" and "R" in the Declaration contain an epoxysilicone of the structure  $M^E D_{22} D^E M^E$  as being representative of the closest species of epoxy silicones taught by Eckberg et al. Comparative Examples P and Q do not contain any carbinol-functional silicone, so are not representative of Eckberg et al. Comparative Example "R" contains an alkylphenol compound in addition to a carbinol functional silicone and thus is not representative of Eckberg et al. None of the Comparative Examples is representative of the compositions taught by Eckberg et al. Applicant has not

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presented any comparative data to show that unexpected results are obtained when the epoxy silicone contains only terminal epoxy groups or when the number of silicon units "D" is limited to "up to 22" or when an alkylphenol component "d" is included in the composition.

Furthermore, the instant claim recitation "substantially no epoxy functional groups...backbone" encompasses the prior art epoxy-terminated silicones having one or more epoxy functional groups positioned along the backbone, as taught by the Eckberg et al and Desorcie patents of record. It is suggested that applicant replace the phrase "substantially no epoxy functional groups...backbone" with "essentially no epoxy functional groups...backbone".

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-23 rejected under 35 U.S.C. 103(a) as being obvious over Eckberg et al (5,814,679) in view of Desorcie et al (5,010,118). Eckberg et al ('679) disclose co-photocuring carbinol-functionalized silicones and epoxy-functionalized silicones to provide improved release properties to release compositions and superior photocurability. Eckberg et al teach that the carbinol-containing silicones provide a lower release force coating (column 10, lines 1-5). Viscosities of the disclosed epoxy silicones range from 100 to 100,000 cstc and viscosities of the disclosed carbinol-containing silicones ranging from 300-15450 cstc are taught (column 3, lines 15-19 and Table 1). Thus Eckberg et al disclose compositions wherein the viscosities of the epoxy silicone and the carbinol silicone encompass those in the instant claims. Table 12

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discloses compositions wherein the epoxy silicone has the formula  $M^E D_{25} M^E$ . The addition of the silicone carbinol is said to eliminate the zippy character of the tight release rendering the release properties both tight and smooth (column 21, lines 20-24). The compositions disclosed comprise the same iodonium salts as instantly claimed (column 13, lines 21-39). The differences from the instantly claimed compositions are that the epoxy-functionalized silicones are not limited to those having “substantially no epoxy functional groups positioned along the backbone of the silicone polymer” and that Eckberg et al do not teach adding an alkylphenol compound. Desorcie et al disclose analogous compositions comprising an epoxysilicone, a polyarylonium salt and a compatibilizer, wherein the compatibilizer is a mixture of an alkylphenol and an alkane diol.

It would have been obvious to one skilled in the art at the time of the invention to employ an epoxy-terminated silicone polymer from those taught by Eckberg et al wherein “y” is a positive integer up to 22, and having substantially no epoxy groups ( $D^E$ ) in the backbone of the epoxy functional silicone, as shown in the epoxy silicone disclosed in column 20, line 53 and used in the compositions in Table 12. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a useful release composition selected from the compositions disclosed by Eckberg et al. Eckberg et al provide motivation by teaching that the epoxy silicone having the formula  $M^E D_{25} M^E$  provides a tight and zippy release and that the addition of the silicone carbinol eliminates the zippy character of the tight release rendering the release properties both tight and smooth. One of ordinary skill in the art at the time of the invention would have expected to control the crosslinking in the product by omitting epoxy functionality along the silicone backbone and providing only epoxy end groups

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for crosslinking. The features of the dependent claims are found within the disclosure of Eckberg et al. See US 4,279,717 and US 5,360,833, incorporated by reference to teach epoxy silicones, column 12, lines 57-66, and Tables 2, 7, 11 and 12. For example, US 5,360,833 discloses low molecular weight silicones terminated with epoxy groups, such as the silicone in Example 4, and teaches that the material is an extremely reactive diepoxy monomer. There is no comparative evidence of record to show that selection of epoxy-terminated silicones wherein the repeating number of dimethylsilicone units is from 1 to 22 and there are no epoxy units along the backbone instead of the disclosed  $M^E D_{25} M^E$  produces unexpected results in the instantly claimed invention.

It would have been obvious to one skilled in the art at the time of the invention to employ the compatibilizer for an epoxy silicone and iodonium salt comprising an alkylphenol disclosed by Desorcie et al in the compositions comprising epoxy silicones and iodonium salts disclosed by Eckberg et al. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of providing substantially uniform epoxysilicone compositions, as taught by Desorcie et al.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
12/23/06



Susan W Berman  
Primary Examiner  
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